
Sequence Listing could not be accepted due to errors.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866)

217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2010; month=5; day=5; hr=7; min=16; sec=37; ms=125;]

Reviewer Comments:

<210> 19

<211> 53

<212> PRT

<213> Artificial sequence

<213> Artificial Sequence

<220>

<221> MISC FEATURE

<222> (18)..(43)

<223> X is any amino acid

<400> 19

Thr Met Val Met Gly Arg Gly Ser His His His His His Ala Arg

1 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Asp Ala Asn Ala Pro 35 40 45

Lys Ala Ser Ala Ile

Please remove the duplicate "<213> Artificial Sequence", and provide a <220>-<223> section giving the source of the genetic material of "Artificial Sequence".

<210> 22

<211> 127

<212> DNA

<213> Artificial sequence

<220>

<221> MISC_FEATURE

<222> (28)..(105)

<223> S and N are A, T, G or C

<400> 22

agcggatgcc ttcggagcgt tagcgtcsnn snnsnnsnns nnsnnsnnsn nsnnsnnsnn 60

atgatga

127

Please provide a <220>-<223> section explaining "<213> Artificial Sequence": please clearly indicate the source of the genetic material. Also, the <223> response regarding the "s's" and "n's" is erroneous: "s" can only represent c or g. Please re-word the <223> response as follows: s represents c or g, and n represents a, t, g or c.

<160> 414

Although the above <160> response is "414", 415 sequences are in the submitted file. See below for last sequence:

<210> 415

<211> 50

<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic sequence, no source organism
<400> 415

Met Gly Arg Gly Ser His His His His His Ala Arg Ser Leu Ser 1 5 10 15

Arg Leu Ala Thr Val Leu Asp Glu Pro Asp Arg Ser Leu Gln Thr Arg 20 25 30

Thr Asn Arg Pro His Arg Met Ile Asp Ala Asn Ala Pro Lys Ala Ser 35 40 45

Ala Ile 50

Validated By CRFValidator v 1.0.3

Application No: 10579655 Version No: 3.0

Input Set:

Output Set:

Started: 2010-05-04 14:49:08.175

Finished: 2010-05-04 14:49:18.784

Elapsed: 0 hr(s) 0 min(s) 10 sec(s) 609 ms

Total Warnings: 380

No. of SeqIDs Defined: 414

Actual SeqID Count: 415

Total Errors:

Error code		Error Description
W	402	Undefined organism found in <213> in SEQ ID (1)
W	402	Undefined organism found in <213> in SEQ ID (2)
W	402	Undefined organism found in <213> in SEQ ID (3)
W	402	Undefined organism found in <213> in SEQ ID (4)
W	213	Artificial or Unknown found in <213> in SEQ ID (5)
W	213	Artificial or Unknown found in <213> in SEQ ID (6)
W	213	Artificial or Unknown found in <213> in SEQ ID (7)
W	213	Artificial or Unknown found in <213> in SEQ ID (8)
W	402	Undefined organism found in <213> in SEQ ID (9)
W	402	Undefined organism found in <213> in SEQ ID (10)
W	402	Undefined organism found in <213> in SEQ ID (11)
W	402	Undefined organism found in <213> in SEQ ID (12)
W	402	Undefined organism found in <213> in SEQ ID (13)
W	402	Undefined organism found in <213> in SEQ ID (14)
W	402	Undefined organism found in <213> in SEQ ID (15)
W	402	Undefined organism found in <213> in SEQ ID (16)
W	402	Undefined organism found in <213> in SEQ ID (17)
W	213	Artificial or Unknown found in <213> in SEQ ID (18)
W	213	Artificial or Unknown found in <213> in SEQ ID (19)
E	249	Order Sequence Error <213> -> <213>; Expected Mandatory

Tag: <400>

Input Set:

Output Set:

Started: 2010-05-04 14:49:08.175
Finished: 2010-05-04 14:49:18.784

Elapsed: 0 hr(s) 0 min(s) 10 sec(s) 609 ms

Total Warnings: 380
Total Errors: 5
No. of SeqIDs Defined: 414

Actual SeqID Count: 415

Error code	Error Description
	SEQID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)
W 213	Artificial or Unknown found in <213> in SEQ ID (21)
W 213	Artificial or Unknown found in <213> in SEQ ID (22)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (22)
W 402	Undefined organism found in <213> in SEQ ID (23)
W 402	Undefined organism found in <213> in SEQ ID (24)
W 402	Undefined organism found in <213> in SEQ ID (25)
W 402	Undefined organism found in <213> in SEQ ID (26)
W 402	Undefined organism found in <213> in SEQ ID (28)
W 402	Undefined organism found in <213> in SEQ ID (29)
W 402	Undefined organism found in <213> in SEQ ID (30) This error has occured more than 20 times, will not be displayed
W 213	Artificial or Unknown found in <213> in SEQ ID (77)
W 213	Artificial or Unknown found in <213> in SEQ ID (78)
W 213	Artificial or Unknown found in <213> in SEQ ID (79)
W 213	Artificial or Unknown found in <213> in SEQ ID (80)
W 213	Artificial or Unknown found in <213> in SEQ ID (253)
W 213	Artificial or Unknown found in <213> in SEQ ID (254)
W 213	Artificial or Unknown found in <213> in SEQ ID (255)

Input Set:

Output Set:

Started: 2010-05-04 14:49:08.175

Finished: 2010-05-04 14:49:18.784

Elapsed: 0 hr(s) 0 min(s) 10 sec(s) 609 ms

Total Warnings: 380
Total Errors: 5

No. of SeqIDs Defined: 414

Actual SeqID Count: 415

Error code		Error Description
W	213	Artificial or Unknown found in <213> in SEQ ID (256)
W	213	Artificial or Unknown found in <213> in SEQ ID (257)
W	213	Artificial or Unknown found in <213> in SEQ ID (258) This error has occured more than 20 times, will not be displayed
E	252	Calc# of Seq. differs from actual; 414 seqIds defined; count=415
E	250	Structural Validation Error; Sequence listing may not be indexable

SEQUENCE LISTING

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<110> Sanofi Pasteur, Inc.
<120> METHODS FOR PURIFYING PERTUSSIS TOXIN AND PEPTIDES USEFUL
      THEREFOR
<130> API-03-15
<140> 10/579,655
<141> 2006-05-18
<150> 60/523,881
<151> 2003-11-20
<150> PCT/US2004/038700
<151> 2004-11-18
<160> 414
<170> PatentIn version 3.5
<210> 1
<211> 7
<212> PRT
<213> Gymnea sylvestre
<400> 1
Asn Gly Ser Phe Ser Gly Phe
             5
<210> 2
<211> 7
<212> PRT
<213> Gymnea sylvestre
<400> 2
Asn Gly Ser Phe Ser Gly Cys
<210> 3
<211> 7
<212> PRT
<213> Gymnea sylvestre
<400> 3
Asp Gly Ser Phe Ser Gly Phe
<210> 4
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<211> 7

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<212> PRT
<213> Gymnea sylvestre
<220>
<221> MISC_FEATURE
<222> (1)..(7)
<223> X is any amino acid
<400> 4
Xaa Gly Ser Phe Ser Gly Xaa
<210> 5
<211> 30
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic sequence, no source organism
<400> 5
Arg Ser Ser His Cys Arg His Arg Asn Cys His Thr Ile Thr Arg Gly
               5
                                  10
Asn Met Arg Ile Glu Thr Pro Asn Asn Ile Arg Lys Asp Ala
          20
                             25
<210> 6
<211> 29
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic sequence, no source organism
<400> 6
Ser Thr Met Asn Thr Asn Arg Met Asp Ile Gln Arg Leu Met Thr Asn
                                  10
His Val Lys Arg Asp Ser Ser Pro Gly Ser Ile Asp Ala
           20
                             25
<210> 7
<211> 30
<212> PRT
<213> Artificial Sequence
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<223> Synthetic sequence, no source organism
<400> 7
Arg Ser Asn Val Ile Pro Leu Asn Glu Val Trp Tyr Asp Thr Gly Trp
                         10
Asp Arg Pro His Arg Ser Arg Leu Ser Ile Asp Asp Asp Ala
             25
<210> 8
<211> 30
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic sequence, no source organism
<400> 8
Arg Ser Trp Arg Asp Thr Arg Lys Leu His Met Arg His Tyr Phe Pro
                         10
Leu Ala Ile Asp Ser Tyr Trp Asp His Thr Leu Arg Asp Ala
          20
               25
<210> 9
<211> 34
<212> PRT
<213> Gymnea sylvestre
<400> 9
Ser Gly Cys Val Lys Lys Asp Glu Leu Cys Ala Arg Trp Asp Leu Val
          5
                         10
Cys Cys Glu Pro Leu Glu Cys Ile Tyr Thr Ser Glu Leu Tyr Ala Thr
                 25
          20
Cys Gly
<210> 10
<211> 34
<212> PRT
<213> Gymnea sylvestre
<400> 10
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Ser Gly Cys Val Lys Lys Asp Glu Leu Cys Glu Leu Ala Val Asp Glu

1 5 10 15

Cys Cys Glu Pro Leu Glu Cys Phe Gln Met Gly His Gly Phe Lys Arg
20 25 30

Cys Gly

<210> 11

<211> 35

<212> PRT

<213> Gymnea sylvestre

<400> 11

Ser Gly Cys Val Lys Lys Asp Glu Leu Cys Ser Gln Ser Val Pro Met

1 5 10 15

Cys Cys Glu Pro Leu Glu Cys Lys Trp Phe Asn Glu Asn Tyr Gly Ile 20 25 30

Cys Gly Ser

35

<210> 12

<211> 34

<212> PRT

<213> Gymnea sylvestre

<400> 12

Ser Gly Cys Val Lys Lys Asp Glu Leu Cys Glu Leu Ala Ile Asp Glu 1 5 10 15

Cys Cys Glu Pro Leu Glu Cys Thr Lys Gly Asp Leu Gly Phe Arg Lys 20 25 30

Cys Gly

<210> 13

<211> 35

<212> PRT

<213> Gymnea sylvestre

<400> 13

Gln Gln Cys Val Lys Lys Asp Glu Leu Cys Ile Pro Tyr Tyr Leu Asp

1 5 10 15

Cys Cys Glu Pro Leu Glu Cys Lys Lys Val Asn Trp Trp Asp His Lys
20 25 30

Cys Ile Gly

<210> 14

<211> 31

<212> PRT

<213> Gymnea sylvestre

<220>

<221> MISC_FEATURE

<222> (9)..(30)

<223> X is any amino acid

<400> 14

Cys Val Lys Lys Asp Glu Leu Cys Xaa Xaa Xaa Xaa Xaa Xaa Cys Cys 1 5 10 15

Glu Pro Leu Glu Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys 20 25 30

<210> 15

<211> 141

<212> DNA

<213> Gymnea sylvestre

<220>

<221> misc_feature

<222> (49)..(113)

<223> n is a, g, t or c

<400> 15

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nnsnnstget gtgageeet egagtgenns nnsnnsnnsn nsnnsnnsnn snnstgegge 120

agcggcagtt ctgggtctag c 141

<210> 16

<211> 84

<212> DNA

<213> Gymnea sylvestre

<400> 16

taatacgact cactataggg acaattacta tttacaatta caatgcacca tcaccatcac 60 84 catagtggct caagctcagg atca <210> 17 <211> 44 <212> DNA <213> Gymnea sylvestre <400> 17 ttttaaatag cggatgctac taggctagac ccagaactgc cgct 44<210> 18 <211> 10 <212> RNA <213> Artificial Sequence <220> <223> Synthetic sequence, no source organism <400> 18 10 uagcggaugc <210> 19 <211> 53 <212> PRT <213> Artificial sequence <213> Artificial Sequence <220> <221> MISC_FEATURE <222> (18)..(43) <223> X is any amino acid <400> 19 Thr Met Val Met Gly Arg Gly Ser His His His His His Ala Arg 5 10 15 20 25 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Asp Ala Asn Ala Pro 35 45 40 Lys Ala Ser Ala Ile

<210> 20

50

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<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic sequence, no source organism
<400> 20
His His His His His
<210> 21
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic sequence, no source organism
<400> 21
Asp Ala Asn Ala Pro Lys
<210> 22
<211> 127
<212> DNA
<213> Artificial sequence
<220>
<221> MISC_FEATURE
<222> (28)..(105)
<223> S and N are A, T, G or C
<400> 22
agcggatgcc ttcggagcgt tagcgtcsnn snnsnnsnns nnsnnsnnsn nsnnsnnsnn
                                                                60
120
                                                               127
atgatga
<210> 23
<211> 81
<212> DNA
<213> Gymnea sylvestre
taatacgact catagggaca attactattt acaattacaa tgggacgtgg ctcacatcat
                                                                60
catcatcatc atgctagatc t
                                                                81
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<210> 24
<211> 32
<212> DNA
<213> Gymnea sylvestre
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                                                                32
<210> 25
<211> 18
<212> DNA
<213> Bacteriophage M13
<400> 25
                                                                18
tgtaaaacga cggccagt
<210> 26
<211> 54
<212> PRT
<213> Gymnea sylvestre
<400> 26
Met His His His His His Ser Gly Ser Ser Gly Ser Gly Cys
              5
                              10
                                                15
Val Lys Lys Asp Glu Leu Cys Ala Gly Ser Val Gly His Cys Cys Glu
         20
                  25
Pro Leu Glu Cys Leu Arg Arg Phe Leu Asn Leu Arg Trp Cys Gly Ser
               40
Gly Ser Ser Gly Ser Ser
   50
<210> 27
<211> 54
<212> PRT
<213> Gymnema sylvestre
<400> 27
Met His His His His His Ser Gly Ser Ser Gly Ser Gly Cys
             5
                              10
Val Lys Lys Asp Glu Leu Cys Ile Val Met Arg Ala Pro Cys Cys Glu
               25
                                             30
        20
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Pro Leu Glu Cys Leu Arg Arg Tyr Met Leu Lys His Met Cys Gly Ser

35 40 45

Gly Ser Ser Gly Ser Ser 50

<210> 28

<211> 54

<212> PRT

<213> Gymnea sylvestre

<400> 28

Met His His His His His Ser Gly Ser Ser Gly Ser Gly Cys $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$

Val Lys Lys Asp Glu Leu Cys Lys Ala Phe Arg Tyr Ser Cys Cys Glu 20 25 30

Pro Leu Glu Cys Leu Arg Lys Trp Leu Lys Ala Arg Phe Cys Gly Ser 35 40 45

Gly Ser Ser Gly Ser Ser 50

<210> 29

<211> 54

<212> PRT

<213> Gymnea sylvestre

<400> 29

Met His His His His His Ser Gly Ser Ser Gly Ser Gly Cys $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15 \hspace{1cm} 15$

Val Lys Lys Asp Glu Leu Cys Leu Arg Ser Ser Ile Asp Cys Cys Glu 20 25 30

Pro Leu Glu Cys Leu Tyr Lys Trp Met Gln Arg Arg Leu Cys Gly Ser 35 40 45

Gly Ser Ser Gly Ser Ser 50

<210> 30

<211> 54

<212> PRT

<213> Gymnea sylvestre

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<400> 30
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Met His His His His His Ser Gly Ser Ser Gly Ser Gly Cys

1 5 10 15

Val Lys Lys Asp Glu Leu Cys Trp Pro Arg Arg His Lys Cys Cys Glu 20 25 30

Pro Leu Glu Cys Leu Leu Glu Met Leu Glu Arg Lys Arg Cys Gly Ser 35 40 45

Gly Ser Ser Gly Ser Ser 50

<210> 31

<211> 53

<212> PRT

<213> Gymnea sylvestre

<400> 31

Met His His His His His Ser Gly Ser Ser Gly Ser Gly Cys

1 10 15

Val Lys Lys Asp Glu Leu Cys Met Ser Met Ala Cys Val Cys Cys Glu 20 25 30

Pro Leu Glu Cys Lys Tyr His Gly Tyr Phe Trp Leu Cys Gly Ser Gly 35 40 45

Ser Ser Gly Ser Ser 50

<210> 32

<211> 54

<212> PRT

<213> Gymnea sylvestre

<400> 32

Met His His His His His Ser Gly Ser Ser Gly Ser Gly Cys 1 5 10 15

Val Lys Lys Asp Glu Leu Cys Ala Val Trp Phe Asp Val Cys Cys Glu 20 25 30

Pro Leu Glu Cys Thr Tyr Gln Ser Gly Tyr Tyr Trp Leu Cys Gly Ser 35 40 Gly Ser Ser Gly Ser Ser 50 <210> 33 <211> 54 <212> PRT <213> Gymnea sylvestre <400> 33 Met His His His His His Ser Gly Ser Ser Gly Ser Gly Cys 1 5 10 Val Lys Lys Asp Glu Leu Cys Glu Pro Trp Tyr Trp Arg Cys Cys Glu 20 25 30 Pro Leu Glu Cys Val Tyr Thr Ser Gly Tyr Tyr Tyr Ser Cys Gly Ser 35 40 45 Gly Ser Ser Gly Ser Ser 50 <210> 34 <211> 54 <212> PRT <213> Gymnea sylvestre <400> 34 Met His His His His His Ser Gly Ser Ser Gly Ser Gly Cys 1 5 10 15 Val Lys Lys Asp Glu Leu Cys Ala Arg Trp Asp Leu Val Cys Cys Glu 20 25 30 Pro Leu Glu Cys Ile Tyr Thr Ser Glu Leu Tyr Ala Thr Cys Gly Ser 35 40 Gly Ser Ser Gly Ser Ser 50 <210> 35

<211> 54 <212> PRT

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<213> Gymnea sylvestre
<400> 35
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1 5 10
Val Lys Lys Asp Glu Leu Cys Val Phe Tyr Phe Pro Asn Cys Cys Glu
   20 25 30
Pro Leu Glu Cys Arg Trp Val Asn Asp Asn Tyr Gly Trp Cys Gly Ser
              40
Gly Ser Ser Gly Ser Ser
  50
<210> 36
<211> 53
<212> PRT
<213> Gymnea sylvestre
<400> 36
Met His His His His His Ser Gly Ser Ser Gly Ser Gly Cys
1 5 10 15
Val Lys Lys Asp Glu Leu Cys Met Ser Met Ala Cys Val Cys Cys Glu
        20 25
Pro Leu Glu Cys Lys Tyr His Gly Tyr Phe Trp Leu Cys Gly Ser Gly
     35
                  40
                                   45
Ser Ser Gly Ser Ser
 50
<210> 37
<211> 54
<212> PRT
<213> Gymnea sylvestre
<400> 37
Met His His His His His Ser Gly Ser Ser Gly Ser Gly Cys
1 5
                     10
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Val Lys Lys Asp Glu Leu Cys Thr Thr Ala Ser Lys Ser Cys Cys Glu 20 25 30

Pro Leu Glu Cys Lys Trp Thr Asn Glu His Phe Gly Thr Cys Gly Ser Gly Ser Ser Gly Ser Ser 50 <210> 38 <211> 54 <212> PRT <213> Gymnea sylvestre <400> 38 Met His His His His His Ser Gly Ser Ser Gly Ser Gly Cys 10 15 Val Lys Lys Asp Glu Leu Cys Ser Gln Ser Val Pro Met Cys Cys Glu 25 20 Pro Leu Glu Cys Lys Trp Phe Asn Glu Asn Tyr Gly Ile Cys Gly Ser 35 40 45 Gly Ser Ser Gly Ser Ser 50 <210> 39 <211> 54 <212> PRT <213> Gymnea sylvestre <400> 39 Met His His His His Ser Gly Ser Ser Gly Ser Gly Cys 1 5 10 15 Val Lys Lys Asp Glu Leu Cys Ala Arg Trp Asp Leu Val Cys Cys Glu 20 25 30 Pro Leu Glu Cys Ile Tyr Thr Ser Glu Leu Tyr Ala Thr Cys Gly Ser 35 40 45 Gly Ser Ser Gly Ser Ser 50

<210> 40 <211> 54

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<212> PRT
<213> Gymnea sylvestre
<400> 40
Met His His His His His Ser Gly Ser Ser Gly Ser Gly Cys
1 5 10 15
Val Lys Lys Asp Glu Leu Cys Ala Arg Trp Asp Leu Val Cys Cys Glu
       20 25
Pro Leu Glu Cys Leu Gly His Gly Leu Gly Tyr Ala Tyr Cys Gly Ser
   35 40
Gly Ser Ser Gly Ser Ser
  50
<210> 41
<211> 53
<212> PRT
<213> Gymnea sylvestre
<400> 41
Met His His His His His Ser Gly Ser Ser Gly Ser Gly Cys
  5 10 15
Val Lys Lys Asp Glu Leu Cys Met Trp Ser Arg Glu Val Cys Cys Glu
              25
       20
Pro Leu Glu Cys Tyr Tyr Thr Gly Trp Tyr Trp Ala Cys Gly Ser Gly
  35 40
Ser Ser Gly Ser Ser
 50
<210> 42
<211> 54
<212> PRT
<213> Gymnea sylvestre
<400> 42
Met His His His His His Ser Gly Ser Ser Gly Ser Gly Cys
               10 15
```

Val Lys Lys Asp Glu Leu Cys Glu Leu Ala Val Asp Glu Cys Cys Glu

25

30

20

Pro Leu Glu Cys Phe Gln Met Gly His Gly Phe Lys Arg Cys Gly Ser 40 Gly Ser Ser Gly Ser Ser 50 <210> 43 <211> 54 <212> PRT <213> Gymnea sylvestre <400> 43 Met His His His His His Ser Gly Ser Ser Gly Ser Gly Cys 1 5 10 15 Val Lys Lys Asp Glu Leu Cys Glu Leu Ala Val Asp Glu Cys Cys Glu 20 25 30 Pro Leu Glu Cys Thr Lys Gly Asp Leu Gly Phe Arg Lys Cys Gly Ser 35 40 Gly Ser Ser Gly Ser Ser 50 <210> 44 <211> 54 <212> PRT <213> Gymnea sylvestre <400> 44 Met His His His His His Ser Gly Ser Ser Gly Ser Gly Cys 1 5 10 Val Lys Lys Asp Glu Leu Cys Glu Leu Ala Ile Asp Val Cys Cys Glu Pro Leu Glu Cys Leu Gly His Gly Leu Gly Tyr Ala Tyr Cys Gly Ser 35 40

<210> 45

50

Gly Ser Ser Gly Ser Ser

<211> 54 <212> PRT

<213> Gymnea sylvestre

<400> 45

Met His His His His His His Ser Gly Ser Ser Gly Ser Gly Cys $1 \ \ \,$ 5

Val Lys Lys Asp Glu Leu Cys Glu Leu Ala Ile Asp Val Cys Cys Glu 20 25 30

Pro Leu Glu Cys Leu Gly His Gly Leu Gly Tyr Ala Tyr Cys Gly Ser 35 40 45

Gly Ser Ser Gly Ser Ser